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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/639,467

08/13/2003

Kaoru Usui

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EXAMINER

HUGHES, DEANDRA M

ART UNIT

PAPER NUMBER

3663

MAIL DATE

DELIVERY MODE

01/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/639,467	Applicant(s) USUI ET AL.	
	Examiner Deandra M. Hughes	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/28/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed 11/28/07 has been entered.

Response to Arguments

2. Applicant's arguments filed 11/5/07 have been fully considered but they are not persuasive. Applicant argues the following:

- (A) "Applicants respectfully submit that in contrast to the present invention, the controller 29 of Kosaka simply feed-back controls the drive current of pump laser 21, thereby allowing the input monitor signals to be constant. Therefore, Kosaka's controller 29 does not control an amplifying unit." (pg. 7, paragraph 6);
- (B) "...Kosaka clearly indicates that the controller 20 controls the current such that a light output of the probe light beam is kept constant. Therefore, in contrast to the present invention, Kosaka's control is not based on light power measured by a specific wavelength measuring unit and total measuring units as in the present invention. Rather, Kosaka's control is simply maintained at a constant..." (pg. 7, paragraph 7);
- (C) "...the system of Kosaka, which only measures the probe light beam, cannot detect the decrease in the level of signal light beams to control the signal light beams as accurately as the optical amplifying apparatus of claim 1 does." (pg. 8, 1st paragraph).

Argument (A) is unpersuasive because it is well known to one of ordinary skill in the art that the pump laser is part of the amplifying unit.

Argument (B) is unpersuasive because Kosaka states that the output of probe light beam is kept constant. This is not the same as keeping the controller constant. Therefore, Applicant mischaracterizes Kosaka's statement that the probe light beam is kept constant as keeping the controller constant.

Argument (C) is unpersuasive because figures of merit pertaining the accuracy of the instant amplification apparatus are not claimed.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 3-9, 11-14, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kosaka (US 6,038,062 published Mar. 14, 2000).

With regard to claims 1, 9, 14 and 19, Kosaka discloses a concatenation of amplifiers (fig. 9); further fig. 2 is an inset of each amplifier of fig. 9;

- a 1st optical amplifying unit (1st instance of #22) amplifying an input light;
- a 2nd optical amplifying unit (2nd instance of #22) amplifying an output light;
- a 1st input branching unit (#18) branching the input light;
- a 2nd input branching unit (#23) branching the output light;
- a 1st optical filter (#36) passing a specific wavelength of the branched input light;
- an 2nd optical filter (#26) passing a specific wavelength of the branched output light;
- a 1st specific wavelength (#37) measuring unit measuring power of filtered input light;
- a 2nd specific wavelength (#28) measuring unit measuring power of filtered output light;
- a total power measuring unit (#38 and #27) measuring the light power of the branched input light and the branched output light; and

- a control unit (#33 and #29) controlling the optical amplifying units based on the light power measured by the specific wavelength measuring units and the total power measuring units.

With regard to claims 3-4, 11-12, and 16-17, note col. 10, lines 40-53.

With regard to claims 5, 13, and 18, the amplifiers are gain controlled via control of the pump #21.

Claim Rejections - 35 USC § 103

4. Claims 2, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka in view of Fujita (US 6,008,935 published Dec. 28, 1999).

Kosaka does not specifically disclose a variable wavelength optical filter. However, Fujita teaches a variable wavelength optical filter for AGC based on a detected branched light (#40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a variable wavelength optical filter for the advantage of isolating a specific channel in the WDM signal.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M. Hughes whose telephone number is 571-272-6982. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deandra M Hughes/
Primary Examiner, Art Unit 3663